July 23, 1998

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: NRC INSPECTION REPORTS 50-373/98012(DRS); 50-374/98012(DRS)

Dear Mr. Kingsley:

On June 5, 1998, the NRC completed an inspection at your LaSalle facility. The primary purpose of this inspection was to review the effectiveness of your controls in identifying, resolving, and preventing problems. The inspection also included a review of the status of the LaSalle Station's Restart Action Plan actions and 50.54(f) commitments. The enclosed report presents the results of that inspection.

Areas examined during the inspection included the corrective action program, the operational experience feedback program, the self assessment program, and safety review committees. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, observations of equipment material condition, and interviews with personnel. In addition, the team assessed corrective actions taken for problems identified in previous resident inspector reports.

The team concluded that the corrective action program at LaSalle was acceptable. Improvements were noted in identification, resolution, and prevention of problems. The corrective action program was accepted by the organization at all levels and was functioning well; however, the transition of some corrective action functions and responsibilities, such as root cause investigations, from a central location back to line organizations will require continued management attention.

Based on the results of this inspection, the NRC has determined that no violations of NRC requirements occurred.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR).

We will gladly discuss any questions you may have concerning this inspection.

Sincerely,

/s/ G. E. Grant

Geoffrey E. Grant, Director
Division of Reactor Projects

Docket Nos. 50-373; 50-374
License Nos. NPF-11; NPF-18

Enclosure: Inspection Reports 50-373/98012(DRS); 50-374/98012(DRS)

cc w/encl: M. Wallace, Senior Vice President
D. Helwig, Senior Vice President
G. Stanley, PWR Vice President
J. Perry, BWR Vice President
D. Farrar, Regulatory
Services Manager
I. Johnson, Licensing Director
DCD - Licensing
F. Dacimo, Site Vice President
T. O'Connor, Station Manager
P. Barnes, Regulatory Assurance
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R. Hubbard
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-373; 50-374
License Nos:	NPF-11; NPF-18
Report Nos:	50-373/98012(DRS); 50-374/98012(DRS)
Licensee:	Commonwealth Edison Company
Facility:	LaSalle County Station, Units 1 and 2
Location:	2601 N. 21st Marseilles, IL 61341
Dates:	May 11 through June 5, 1998
Inspectors:	I. N. Jackiw, Team Leader R. A. Westberg, Reactor Engineer R. A. Winter, Reactor Engineer G. Hausman, Reactor Inspector
Approved by:	Ronald N. Gardner, Chief Engineering Specialists Branch 2 Division of Reactor Safety

EXECUTIVE SUMMARY

LaSalle County Station, Units 1 and 2
NRC Inspection Reports 50-373/98012; 50-374/98012

This announced inspection reviewed the effectiveness of the corrective action program. In addition, a number of 50.54(f) commitments and LaSalle Restart Action Plan activities were reviewed.

Operations

- The team concluded that the corrective action program at LaSalle was acceptable. Improvements were noted in identification, resolution, and prevention of problems. The transition of some corrective action functions and responsibilities, such as root cause investigations, from a central location back to line organizations will require continued management attention. (Section O7.1)

- The team concluded that the root cause analysis process had improved since the start of 1998. This improvement was due, in part, to new standardized corrective action procedures that resulted in better documentation of root causes and corrective actions and reduction of repeat events due to more effective corrective actions. (Section O7.2)

- Corrective action to prevent recurrence and previous event reviews for recently completed root cause analyses appeared in some instances to be too narrowly focused. In one instance, a root cause analysis did not consider the programmatic aspects of the issue and in another instance, the written root cause report could not be properly assessed without discussions with the responsible investigators. (Section O7.2)

- The root cause investigation for the May 5th valve manipulation outside the out-of- service (OOS) event was good. The root cause investigation was prompt, thorough, and showed good use of root cause investigation techniques. The report was well written and its conclusions were technically sound. (Section O7.3)

- The team concluded that programs that implement operating experience contained sufficient responsiveness and appeared to have mechanisms to notify and train appropriate personnel on the issues. The weakness identified with GE's distribution of SALs has been corrected by the licensee. (Section O7.4)

- The team concluded that appropriate mechanisms were in place for self-assessment and quality assurance activities and that a number of plant and organizational problems were being identified. (Section O7.5)

- The inspectors concluded that the licensee made reasonable progress toward addressing 10 CFR 50.54(f) commitments discussed in the March 28, 1997, letter to the NRC. The company wide procedure standardized and more clearly delegated responsibilities relating to problem identification, operating experience and self assessment. (Section O8.1)
- The inspectors concluded that the actions planned or accomplished under Restart Action Plan Items C.2.1.a, "Effectiveness of Quality Assurance Program," C.2.1.d, "Effectiveness of Deficiency Reporting Program," C.2.1.g, "Effectiveness of Commitment Tracking Program," C.2.2.c, "Management Involvement in Self Assessment and Independent Self

Assessment Capability," C.2.2.h, "Management's Ability to Implement Effective Corrective Actions," and C.3.4.b, "Engineering Assurance Group," were thorough, and if properly implemented, should be effective. (Sections O8.2, O8.3, O8.4, O8.5, O8.6 and O8.7).

Report Details

I. Operations

O7 Quality Assurance in Operation Activities

O7.1 Corrective Action Program

a. Inspection Scope (40500)

The team assessed the Corrective Action Program (CAP) through review of implementing procedures, Problem Identification Forms (PIFs), corrective action management reports, corrective action effectiveness reviews, Corrective Action Review Board (CARB) minutes, and action taken for previously identified trends. The team also attended two CARB meetings during the on-site inspection period and interviewed cognizant personnel concerning the corrective action and PIF processes. In addition, the team assessed corrective actions taken for problems previously identified in resident reports.

A review of the past two-year period indicated that corrective actions at LaSalle have historically been a problem. During a semi-annual audit of the Corrective Action Program in February 1997, the licensee identified and documented significant deficiencies with the program. One deficiency observed was that in many instances individuals did not write PIFs for identified station problems.

b. Observations and Findings

The team observed that the corrective action program at LaSalle had improved since enhancements to the corrective action process were implemented in May 1997. Problems were identified via the PIF process, the more significant issues were investigated for root causes, trends were identified and tracked, significant corrective actions received interdisciplinary review through the CARB, observations were made in the field to improve problem prevention, and the overall collective significance of issues and trends was assessed quarterly.

To monitor jobsite performance and reinforce positive behaviors, a Scorecard monitoring system initiated in 1997 was being used by supervisory personnel in the plant. The team considered this to be a proactive method for problem prevention.

The threshold for identifying problems via PIFs was considered low and the number of PIFs generated was high. Personnel interviewed indicated a willingness to identify problems, considered the process to be owned equally by all plant staff, and did not consider PIFs written against themselves to be negative.

Of the sample of PIFs reviewed by the team, the root cause analyses appeared to be thorough and effective. When LaSalle extended Corrective Actions, they extended the due dates appropriately.

The CARB was effective in its oversight of PIF investigations and corrective actions. It did not appear to be a rubber stamp for corrective actions. In fact, the team observed that a number of PIFs were rejected at the CARB meetings attended during the inspection. The

effectiveness reviews provided good feedback for redirection of corrective actions and resources.

The team also observed several noteworthy practices that should contribute to the effectiveness of the corrective action program. LaSalle employed trending at all levels, including monthly corrective action management reports and quarterly Quality and Safety Assurance (Q&SA) audits of corrective action effectiveness. Other examples included daily review of new PIFs, the review of existing significant PIFs, and the discussion of the oldest PIFs during the daily Plan of the Day (POD) meetings; quarterly report of performance indicators; discussions of the corrective actions to prevent recurrence, and PIF remedial actions at the CARB; and senior management review of all Level 1 and 2 PIFs.

At the completion of this inspection, LaSalle was planning to realign some CAP functions and responsibilities examined in this report. For example, the Root Cause Team will be disbanded and root cause investigation will become a line responsibility, each department will be totally responsible for their own self-assessments, Operating Experience will be moved from CAP to Regulatory Assurance and Q&SA will realign several staff positions from quality control functions to put more emphasis on assessment.

c. Conclusions

The team concluded that the corrective action program at LaSalle was acceptable. Improvements were noted in identification, resolution, and prevention of problems. The transition of some corrective action functions and responsibilities, such as root cause investigations, from a central location back to line organizations will require continued management attention.

O7.2 Root Cause Analysis Program

a. Inspection Scope (40500)

Historically, performance of root cause analysis has been a problem at LaSalle and the other ComEd nuclear stations. In 1996, ineffective corrective actions, repeat events, and poor quality root cause reports and LERs led to the stations committing to implement a standardized corrective action program and create the Corrective Action Review Boards (CARB). The February 1997 semi-annual audit of the corrective action process at LaSalle identified a continuing problem with root cause analyses failing to identify the correct root cause. The corrective action taken for this audit included assignment of specific personnel in each line organization to perform root cause analysis, training of dedicated root cause investigators in investigative techniques, and the establishment of CARB training and membership requirements.

In May 1997, ComEd implemented the standardized corrective action process at all nuclear stations. The new CAP included procedures for root cause analysis, root cause investigation, apparent cause evaluation, and integrated reporting. In addition, LaSalle implemented a new CARB procedure. However, the semi annual audit of corrective action conducted in August 1997 again identified inadequate root cause investigation and corrective action as a continuing problem. As a result, a team of dedicated root cause investigators was assembled under the direction of the CAP manager.

In February 1998, a corporate assessment of CAP implementation concluded that there was insufficient senior management involvement in the review and approval of root cause investigations. As a result, LaSalle revised the CARB procedure to clarify the roles and responsibilities of CARB membership.

The team used the forgoing historical information as a benchmark to assess the current status of performance of root cause analysis at LaSalle. Thirteen root cause analyses completed in 1998 were reviewed. The reports for these root cause analyses were evaluated concerning initial problem identification and characterization, assessment of operability, immediate corrective actions, corrective actions to prevent recurrence, and evaluation of repetitive problems. In addition, a sample of issues from operational events and repetitive equipment problems were selected for review relative to problem identification and resolution. The team reviewed the corrective actions taken for these problems and interviewed personnel to determine their understanding of these actions.

b. Observations and Findings

The team noted that, in general, root cause reports (RCRs) had improved since the start of 1998. However, the team questioned the documentation of several root cause reports. Examples follow:

- RCR No. 373-200-98-SCAQ00016.00, "Incorrect Oil Used in Safety Related Ventilation Damper Actuator Due to Incorrect Part/Item Number." The corrective actions to prevent recurrence (CAPR) were too narrowly focused on using the incorrect oil and did not address the programmatic aspects of Parts Classification Evaluations (PCEs) with incorrect information. For example, CAPR No. 4 initiated an action to perform a sampling of previous PCEs for appropriate part/item reference, but only addressed PCEs for lubricating oils and hydraulic fluids. In response to the team's questions, the licensee agreed that the CAPR was overly narrow and that the root cause analysis could have been expanded to include an evaluation of the adequacy of the PCE program. LaSalle scheduled a corrective action effectiveness review for this event with a due date of December 1, 1998.

- RCR No. 373-200-98-SCAQ00010.00, "Safety-Related Duct Supports Issued With Missing Welds Due to Personal Error." The team was not able to assess the root cause report without discussing this RCR with the appropriate investigators. In order to understand whether sufficient in-depth analysis had been performed, a number of questions regarding this RCR were discussed with licensee representatives. The licensee ultimately responded to all these questions with acceptable answers; however, the team believed that the RCR should have been sufficiently documented to be a stand alone document.

c. Conclusions

The team concluded that the root cause analysis process had improved since the start of 1998. The improvement was due, in part, to new standardized corrective action procedures that resulted in better documentation of root causes and corrective actions, reduction of repeat events due to more effective corrective actions.

However, the team noted that corrective actions to prevent recurrence and previous event

reviews for some recently completed root cause analyses appeared to be too narrowly focused. In one instance, a root cause analysis did not consider the programmatic aspects of an issue and in another instance, the written root cause report could not properly be assessed without discussions with the responsible investigators.

O7.3 Operational Events Root Cause Review

a. Inspection Scope (40500)

A May 7, 1998 operational event presented the team with an opportunity for on-site observation of many of the aspects of the Root Cause Analysis Program. The team reviewed the prompt investigation; interviewed the primary investigator; reviewed RCR 373-200-98-SCAQ00024, "Configuration Control Issue: Work Performed Outside of Out Of Service and Valves Closed, Due to Worker Non-Compliance and Supervisor Deficiencies," Revision 0; and attended the CARB for this event.

b. Observations and Findings

Event Description

On May 7, 1997, a day shift operator was performing OOS No. 980001871 for modification work on the Unit 1 Reactor Water Clean Up (RWCU) system to install new sight glasses on the RWCU pump vents and drains. The operator discovered that the pump flush water supply valves, 1C11-F448A/B, were out of their normal position and already closed even though the valves were outside the existing OOS authorization.

Immediate Actions

The Shift Manager initiated a prompt investigation that proceeded during the night shift from approximately 22:30 to 06:00 on May 8. The prompt investigation quarantined the area of the CRD purge rack as well as all hardware that had been removed starting on May 6. All personnel involved in the modification work were interviewed and gave statements, except one person who was unavailable. The Construction Department recalled all the work packages in the field that had a tie to the OOS and reviewed the adequacy of the OOS for the work covered by the work packages. Operations subsequently completed a valve line-up for the RWCU system on May 9 with acceptable results.

On day shift of May 8, a meeting was held with the Station Manager and several of his staff to discuss the prompt investigation. A decision was made to conduct a root cause investigation.

Team Observations

During the week of May 11, the team interviewed the principal investigator associated with the event and discussed the event and the results of the prompt investigation. During the week of May 25, the team discussed the preliminary results of the investigation in detail with the investigator including the root causes, corrective actions, and the actions to prevent recurrence. The team noted that while Root Cause No. 3 did not adequately determine the root cause for the individual failure that resulted in closing the isolation valves for working on the flow element and spool pieces, the final report documented an

apparent cause that the individual was overconfident based on his past practice of manipulating valves. The team considered this root cause determination to be appropriate. The team reviewed the final root cause report and attended the CARB for this event on May 28, 1998.

c. Conclusions

The root cause investigation for the May 5th valve manipulation outside the Out of Service (OOS) event was good. The root cause investigation was prompt, thorough, and showed good use of root cause investigation techniques. The report was well written and its conclusions were technically sound.

O7.4 Operating Experience Program

a. Inspection Scope (40500)

The team evaluated the adequacy of the licensee's programs that implement operating experience information.

b. Observations and Findings

The licensee implemented procedure NSWP-A-O, Revision 0, “Operating Experience,” on February 27, 1997. This represented an improved and standardized approach for initiating and evaluating Nuclear Operating Division (NOD)-wide action in response to operating experience at any of the ComEd nuclear stations. Notification was accomplished through the lessons learned program that communicated information, such as, the breaker problems at Dresden where they identified a problem with receiving SALs and the reactivity event at Zion. The procedure also addressed the response to operating experience items from non-ComEd stations. The procedure provided for review and screening of operating experience items, development of responsive action, and review and evaluation of the effectiveness of responsive actions taken. The licensee maintained a process to review operating experience reports, such as significant event reports, significant operating event reports, and significant event
notifications generated by the Institute of Nuclear Power Operations. NRC notifications, vendor reports, and reports from similar facilities were included in the review process.

The NTS system was used to document industry and operating experience information. Historically some operating experience issues were not handled well such as SBM switches that LaSalle did not periodically inspect as recommended by a Service Information Letter (SIL). In response, the licensee has initiated proceduralized requirements for timely initial screenings, resolution and tracking of items. Although the team identified no programmatic concerns, some implementation weaknesses were noted. For example, even though vendor supplied information was generally well screened, the licensee discovered, based on problems encountered at Dresden in 1996, Service Advisory Letters (SALs) from GE that had not always been sent to LaSalle. The licensee requested and recently received a complete listing of all GE SALs that allowed the licensee to obtain and document a large population of SALs that had previously been unknown. Electronic listings at industry websites allowed access to many emerging operating experience issues as well as historical information.

c. Conclusions

The team concluded that programs that implement operating experience contained sufficient responsiveness and appeared to have mechanisms to notify and train appropriate personnel on the issues. The weakness identified with GE's distribution of SALs has been corrected by the licensee.

O7.5 Self-Assessment Activities

a. Inspection Scope (40500)

The team evaluated the effectiveness of the licensee's self-assessment capability by reviewing department self-assessment reports, Q&SA quarterly self-assessment reports, and Q&SA audits. In addition, the team interviewed cognizant personnel.

b. Observations and Findings

The team reviewed documented information regarding improvements including self-assessments, Q&SA assessments and ISEG assessments. Recommendations from self-assessments performed under LAP 1500-9 "Self-Assessment Program" dated June 23, 1997, were loosely tracked usually without responsibilities assigned to a specific individual and without due dates for recommended actions. Self-assessments functioned as a status report of what the department had accomplished or intended to accomplish rather than a tool for improvement. The licensee replaced LAP 1500-9 with NSP-AP-3009, "Self-Assessment Program," Revision 0, dated February 17, 1998,

Although self-assessments appeared to be sufficient in number and most departments were committed to the program, the process was evolving and not fully utilized. Some good recommendations came from the self-assessments; however, there was no centralized mechanism to track all recommendations. The team noted that self-assessments under the new procedure will use a consistent tracking mechanism, the NTS system, to track responsibility and due dates and will provide ease of a management overview of all self-assessment action items. The lack of consistent management direction had slowed progress of the program. The team also noted that the value-added concept for self-assessments had not been recognized in all departments, in part, due to only recently developing adequate performance criteria to measure the effectiveness of self-assessments within each organization.

The team reviewed a sample of Q&SA audits and the audit schedule and determined sufficient audits were being performed to cover required areas. The licensee continued to make changes to improve the Q&SA programs. At the end of the inspection the license announced plans to increase the number of staff working in the assessment group.

c. Conclusions

The team concluded that appropriate mechanisms were in place for self-assessment and quality assurance activities and that a number of plant and organizational problems were being identified.

O8 Miscellaneous Operations Issues

O8.1 10 CFR 50.54(f) Letter Commitment Review

a. Inspection Scope (40500)

The team reviewed licensee commitments, pertaining to ComEd's March 28, 1997 response to the NRC's request for information pursuant to 10 CFR 50.54(f). The team reviewed the following commitments. The commitment numbers correspond to those used by the licensee in their March 28, 1997 response.

b. Observations and Findings

b.1 Commitment No. 55: In order to ensure that corrective actions and responses to lessons learned are consistently and vigorously implemented throughout the NOD, a new corrective action program has been developed by representatives from all six nuclear sites and the NOD central office.

The team verified that on May 12, 1997, the new corrective action process (CAP) was implemented at all ComEd sites. Standardized nuclear station work procedures (NSWPs) were developed and implemented in the following areas: operating experience; event response guidelines; station performance trending/monitoring; quarantine of areas, records, and equipment; root cause reports, root cause investigation, licensee event report/security event reports; integrated reporting program, effectiveness reviews, and apparent cause evaluations.

A common set of corrective action performance indicators was developed and implemented at all sites. Performance indicators were summarized and communicated on a monthly basis.

The team noted examples of vigorous implementation of lessons learned that included communication of the Zion reactivity incident to licensed operators at all six sites through a series of workshops, memos to key engineering personnel, and revision of Nuclear Operations Policy (OP)-09, "Operations Control of Critical Activities," and Nuclear Operations Directive (NOD)-23, "Reactivity Management."

b.2 Commitment 56: The new process includes several improvements over the current program. It clearly delineates and standardizes the threshold for problem identification through Problem Identification Form (PIF) initiation, and establishes common PIF screening criteria that provide greater ability to analyze PIF data.

The team verified that the licensee's new process included several improvements over the previous program. The new process more clearly delineated and standardized the threshold for problem identification through PIF initiation and established common PIF screening criteria that provide a greater ability to analyze PIF data.

Procedure NSWP-A-15, "ComEd Nuclear Division Integrated Reporting Program," included the standardized PIF threshold that was applicable to all sites. This procedure was revised on May 12, 1997.

b.3 Commitment No. 57: The new corrective action process will include human error reduction methodology, including standardized coding, problem identification, trend analysis, and

root cause analysis techniques.

The team verified that the new process included the corrective action process system (CAPSYS), a computerized database, which utilized standardized coding for human performance for electronic PIF generation and apparent cause evaluation (ACE). CAPSYS and the existing Nuclear Tracking System (NTS) share data that provides for trending. CAPSYS PIF numbers and NTS item numbers were cross referenced in both tracking systems. Data from CAPSYS was used to generate the quarterly issues reports for the sites and periodic common cause analyses of recent significant events at all ComEd nuclear stations.

b.4 Commitment 59: Groups of these trained individuals will be stationed at each of the nuclear plant sites and in the NOD central office.

The team verified that the licensee retained a consultant, Performance Improvement International (PII), to conduct a root cause analysis training class in response to this commitment. The team also verified that all required personnel had been assigned to the specific positions and had completed the required training.

b.5 Commitment No. 60: Personnel will also be trained on the new corrective action process and on human error reduction techniques.

Training on the CAP was conducted at all ComEd sites starting in May of 1997. The team verified completion of training records for the CAP. Training on human error reduction (HER) techniques was begun at LaSalle in the Fall of 1997 and approximately 120 site personnel were trained. HER training was placed on hold at that point because of outage priorities and the lack of qualified and trained instructors on-site. Completion of HER training was scheduled to begin in the Summer of 1998 and was currently being tracked under NTS 373-315-98-00001.00.

b.6 Commitment 61: The remaining sites have developed plans to implement the process (corrective action) during 1997.

The team verified that on May 12, 1997, the licensee implemented Revision 1 for procedure NSWP-A-15, “ComEd Nuclear Division Integrated Reporting Program.” (See Sections O7.1, O7.2, O7.4, O7.5)

b.7 Commitment 63: The information will be taken monthly and used to evaluate the effectiveness of corrective action process improvements as well as participation by each site in the process.

The team noted that the licensee CAP Win Team identified fourteen performance indicators to measure the health of the Corrective Action Program. Guidance was issued to sites to provide a baseline in which to measure the progress of the CAP improvements at the sites. As of June 1997, all six sites provided performance indicator data to corporate and with this data corporate provided a report with an analysis targeting areas for improvement.

b.8 Commitment 64: Performance indicators have also been developed to monitor the timeliness of implementation, quality of the corrective actions, and the number of significant events which are repeated. These indicators are being tested at Byron. Site and NOD

central management will take appropriate actions based upon performance and results.

The team noted that several levels of management used the performance indicators to track progress in performance at the LaSalle station. Regularly scheduled meetings such as the Plan of the Day (POD) and department monthly meetings discussed the indicators and the resulting trends. Appropriate actions were initiated to address negative trends.

b.9 Commitment 71: In February 1997, a procedure was issued for evaluating and initiating NOD-wide action in response to operating experience at any of the ComEd nuclear stations. The procedure also covers response to operating experience items from non-ComEd stations. The procedure provides for review and screening of operating experience items, development of responsive action, and review and evaluation of effectiveness of responsive action.

The licensee implemented procedure NSWP-A-O, Revision 0, “Operating Experience,” on February 27, 1997. This procedure was written to address previous instances of inadequate reviews and failures to follow through with recommended actions for operating experience information. (See Section O7.4)

b.10 Commitment 185: Implementing aggressive actions to fix plant deficiencies through the Material Condition Improvement Program and resolution of operator distractions through completion of the Restart Plan; Using the Corrective Action Program to drive identification and resolution of potential plant material condition deficiencies through review, evaluation and trending PIFs.

The team noted that LaSalle Station's Restart Plan Strategy 3, "Plant Material Condition," and Strategy 4, "Effective Engineering Support," provided a plan for the resolution of material condition issues at LaSalle County Station and preparing LaSalle for a safe restart and uneventful Unit run. The actions taken pursuant to these strategies provide the bases for the licensee’s conclusion that the material condition issue at LaSalle Station had been addressed in a satisfactory manner.

The licensee concluded that the extensive reviews conducted to identify material condition deficiencies, the screening processes used to ensure that significant deficiencies were resolved during L1F35, the physical improvements accomplished during this outage, and the subsequent self-assessment findings demonstrate that the material condition of LaSalle Unit 1 has been satisfactorily addressed. The System Readiness Review and System Testing processes confirm that components and systems function as designed and that systems important to safety will function as designed. Therefore, the licensee stated that upon completion of the outstanding work currently included in the L1F35 outage, and appropriate resolution of any newly identified issues, the material condition of LaSalle Unit 1 will be ready to support safe Unit 1 restart and sustained, reliable operation. The NRC will monitor these activities during the restart and operation phases of the plant.

c. Conclusions

The inspectors concluded that the licensee made reasonable progress toward addressing 10 CFR 50.54(f) commitments discussed in the March 28, 1997, letter to the NRC. The company wide procedure standardized and more clearly delegated responsibilities relating to problem identification, operating experience and self assessment.

O8.2 Review of NRC Restart Action Plan 0350 Item C.2.1.a, "Effectiveness of Quality Assurance Program"

a. Inspection Scope (40500)

The team reviewed NRC Restart Action Plan, Item C.2.1.a, regarding the Effectiveness of the Quality Assurance Program. Specifically, Action Plan 5.2 was reviewed regarding actions to improve Site Quality Verification's (SQV) ability to diagnose Nuclear Safety and Quality concerns and effectively communicate those issues to line management for

resolution prior to external identification or self revealing events. Action Plan 5.3 was reviewed regarding actions to improve Department self-assessments and effectiveness.

b. Observations and Findings

b.1. Action Plan 5.2 - Improve SQV's ability to diagnose Nuclear Safety and Quality concerns and effectively communicate those issues to line management for resolution prior to external identification or self revealing events.

The team reviewed actions initiated to improve Site Quality Verification (now Q&SA) effectiveness through better identification of safety and quality issues and better communication to line management. Q&SA formalized expectations maintaining independent oversight and performance monitoring. Additionally, the department hired new personnel with experience in engineering, operations and assessment and improved accountability by assigning a functional area of responsibility to each auditor. The licensee also implemented a program to share resources for audits Company-wide. Q&SA regularly performed self-assessments of their own department in accordance with NSP-AP-3009 and established an internal lessons learned program. Finally, Q&SA conducted regular monthly meetings between Q&SA and the Site Vice President to discuss Q&SA's performance. The team determined that, collectively, the actions for implementing improvements within Q&SA were comprehensive and should be effective.

b.2. Action Plan 5.3 - Improve Department self-assessments and effectiveness

In June 1997, LaSalle implemented procedure LAP 1500-9, "Self-assessment Program." In April 1998, the licensee performed an assessment of the self-assessments that had previously been conducted under LAP 1500-9. The inspectors noted that the licensee identified that these self-assessments were generally weak and without clarity. The weaknesses were attributed to the lack of specific guidance and controls for dealing with self assessment issues. Generally, Department self-assessments functioned as a status report of what the department had accomplished or intended to accomplish rather than a tool for improvement. After a company-wide review on improving the self-assessment process, LaSalle implemented NSP-AP-3009, "Self-Assessment Program," on March 20, 1998 to replace LAP-1500-9. This procedure was created to self-identify potential problems early, before significant consequences result, and to allow time for corrective actions to be implemented to correct the problems. In the team's judgement, a good foundation for self-assessment process improvement existed because of Q&SA's more aggressive role as facilitator for self assessments and the new self assessment procedure that provides improved guidance and controls for resolving identified issues.

c. Conclusions

The inspectors concluded that the actions planned or accomplished under Action Plan 5.2 and Action Plan 5.3, under Restart Action Plan Item C.2.1.a, "Effectiveness of Quality Assurance Program," were comprehensive, and if properly implemented, should be effective. (See Sections O7.1 and O7.5)

O8.3 Review of NRC Restart Action Plan 0350 Item C.2.1.d, "Effectiveness of Deficiency Reporting Program"

a. Inspection Scope (40500)

The team reviewed NRC Restart Action Plan Item C.2.1.d, regarding the effectiveness of the deficiency reporting program.

b. Observations and Findings

b.1 Action Plan 5.1, Step 6.0 - Issue Clear Guidance/Communication on the Problem Identification Form (PIF) Process.

The team verified that the licensee had addressed this Action Plan step and issued clear guidance/communication on the PIF process. The LaSalle PIF Process was controlled through NSWP-A-15, "Integrated Reporting System," implemented in March 1997. The corporate program provides a consistent method for use by all ComEd nuclear sites for identifying problems and non-conformances, establishing methods for investigating those conditions, identifying the root cause(s), developing appropriate corrective actions that will prevent recurrence, and providing data that can be used for trending. The team noted that training was provided to more than 900 station personnel including Station management. This training addressed changes to the program as well as new information related to increasing the understanding of the problem identification and resolution process. (See Section 07.1)

b.2 Action Plan 5.1, Step 12.0 - Implement a formal CARB [Corrective Action Review Board] Procedure.

The team verified that Procedure No. LAP 1500-8E, “Corrective Action Review Board (CARB) Procedure,” Revision 0, was issued on May 29, 1997. The procedure established the CARB’s oversight role for PIF investigation and corrective actions. This procedure was revised and reissued on February 26, 1998, incorporating lessons learned from the previous eight months of use. (See Section 07.2)

b.3 Action Plan 5.1, Step 13.2 - Establish indicators for measuring CARB effectiveness.

The team reviewed records and interviewed Q&SA personnel and noted that the restart action plan originally established two performance indicators to measure CARB effectiveness. The indicators were root cause approval rate and a LER/RCR quality index. The root cause approval rate was defined as the percentage of root cause reports (RCR) accepted by the CARB monthly with 45% or greater being considered acceptable. The LER/RCR quality index was an average numeric grade given by the on-site corrective actions group to data supplied by the Off-site Safety Review Group. The data supplied by the off-site safety group was a quality rating from 1 to 3 for each RCR and LER. CARB effectiveness was determined by comparing the RCR approval rate to the LER/RCR quality index’s independently generated rating.

In January 1998, the Corporate Corrective Action Manager discontinued use of the LER/RCR Quality Index because grades issued by the off-site safety review were generally consistent in value and not all RCRs were reviewed by this group. This led to the establishment of two new performance indicators. First, a new target approval rate of 85% or greater for RCRs and second, repeat events less than one per month. In addition, CARB effectiveness is also measured by periodic reviews by Q & SA and the Off-site Safety Review Board. The inspectors concluded that the licensee had established appropriate methods for reviewing CARB effectiveness.

c. Conclusions

The inspectors concluded that the actions planned or accomplished for Action Plan 5.1 steps 6.0, 12.0 and 13.2, under Restart Action Plan Item C.2.1.d, “Effectiveness of Deficiency Reporting Program,” were thorough, and if properly implemented, should be effective.

O8.4 Review of NRC Restart Action Plan 350 Item C.2.1.g, “Effectiveness of Commitment Tracking Program.”

a. Inspection Scope (40500)

The team reviewed NRC Action Plan Item C.2.1.g relating to the effectiveness of the commitment tracking program. Verification included a review of the implementation of Action Plan 5.1, Step 7, "Implement a formal NTS (Nuclear Tracking System) Procedure."

b. Observations and Findings

Action Plan 5.1, Step 7 - Implement a formal NTS (Nuclear Tracking System) procedure.

The team noted that as part of the development of a commitment accountability process that included clear management expectations, LaSalle issued a new NTS process procedure LAP-1500-4, “Site Program for Tracking Corrective Action.” The procedure was implemented in May 1997, and revised in February 1998. Key aspects of the procedure included defining corrective action tracking responsibilities, the process for tracking corrective actions, the use of completion extensions and the process for closing corrective actions. An enhancement made in February 1998 included the requirement that the documentation package fully support closure of an item. Previously, LAP-1500-4 did not distinguish the tracking of commitments versus corrective actions. The team noted that closure of all NTS items that track both regulatory commitments and corrective actions includes review and sign off by either the Regulatory Assurance Manager, the Corrective Action Program Manager or Q&SA.

c. Conclusions

The team concluded that the actions planned or accomplished for Action Plan 5.1 Step 7.0, under Restart Action Plan Item C.2.1.g, “Effectiveness of Commitment Tracking Program,” were thorough, and if properly implemented, should be effective.

O8.5 Review of NRC Restart Plan 0350 Item C.2.2.c, “Management Involvement in Self-Assessment and Independent Self-Assessment Capability.”

a. Inspection Scope

The team reviewed NRC Action Plan Item C.2.2.c regarding the effectiveness of management involvement in self-assessment and independent self-assessment capability.

b. Observations and Findings

The team noted that Restart Action Plan Strategies 4 and 5 contain actions that relate to management involvement in self-assessment and independent self-assessment capability. The applicable Action Plan Steps from each Strategy are as follows:

- Strategy 4, Action Plan 4.1, Step 7
- Strategy 5, Action Plan 5.2
- Strategy 5, Action Plan 5.3

b.1 Action Plan 4.1, Step 7 - Perform self-assessment of above effectiveness (to improve Engineering capabilities).

The team verified the preliminary actions of a self-assessment that was currently being performed to assess the effectiveness of corrective actions implemented in response to four violations. The inspectors determined that the self-assessment followed the guidance in procedure NSP AP-3009, "Self-Assessment Program." This procedure required management involvement in several parts of the self-assessment process. For example: step 1.3 specified the roles of the Site Vice President, Station Manager and Department Managers in the process; the Department Head was required to approve the self-assessment schedule developed for his/her department and approve the results of the self-assessment. In addition, step 7.12.5 of the procedure required that the appropriate department representative present a synopsis of the self-assessment to the Site Vice President and Station Manager. The team observed engineering daily meetings and determined that management was actively involved in the process.

b.2 Action Plan 5.2 - Improve Site Quality Verification Effectiveness.

The team verified the actions initiated to improve Site Quality Verification (now Q&SA) effectiveness. The team noted that the Q&SA manager was directly involved in the self-assessment process not only as required by NSP-AP-3009, “Self-Assessment

Program," but also in an oversight capacity through Q&SA review of department self-assessments as part of the audit process. (See Section O8.2)

b.3 Action Plan 5.3 - Improve Departmental Self-Assessments and Effectiveness.

The team verified that the licensee had initiated actions to improve departmental self-assessments and effectiveness. The Corrective Action Program (CAP) Manager directed an assessment be performed of the self-assessments conducted under the previous procedure LAP 1500-9. This assessment identified that the self-assessments conducted using LAP-1500-9 were generally weak and without clarity. The team reviewed a memorandum issued by G. Stanley, PWR Vice President, and S. Perry, BWR Vice President, to the Site Vice Presidents, titled "Expectations for Self-Assessment Program Implementation," and dated February 27, 1998. The memorandum specified certain actions related to implementation of NSP-AP-3009 and directed that these actions be completed by March 31, 1998. The team noted that training on this corporate program was conducted prior to implementing the procedure and self-assessments are now being performed using NSP-AP-3009. (See Section O8.2)

Conclusions

The team concluded that the actions planned or accomplished for Action Plans 4.7, 5.2 and 5.3, under Restart action Plan Item C.2.2.c, "Management Involvement in Self-Assessment and Independent Self-Assessment Capability," were thorough, and if properly implemented, should be effective.

O8.6 Review of NRC Restart Action Plan 0350 Item C.2.2.h, "Management's Ability to Implement Corrective Actions"

a. Inspection Scope (40500)

The team reviewed Item C.2.2.h regarding measuring self-assessment capability and management effectiveness by gauging "management's ability to implement effective corrective actions."

b. Observations and Findings

The team noted that two LaSalle Restart Action Plan Steps provide insights on management's ability to implement effective corrective actions; Action Plan l.l A. Step 15 and Action Plan 5.1 Step 8.

b.1 Action Plan 1.1 A, Step 15 - Establish "baseline" data points for the SCORECARD monitoring system.

The team noted that the SCORECARD monitoring system was a process to monitor and reinforce behaviors that promote event-free operation related to personnel performance and nuclear safety. Thus, it was a means by which management ensured the implementation of effective corrective actions. The SCORECARD monitoring system has been in place since February 1997, and is being used on an ongoing basis to assess important operator performance parameters. The SCORECARD parameters established a "baseline" from which management can initiate corrective actions. Subsequent

monitoring of performance then provide management with feedback on the effectiveness of its actions.

b.2 Action Plan 5. 1, Step 8 - Implement the new Nuclear Division Corrective Action NSWPs

The team verified that the new corporate Corrective Action Program (CAP) Nuclear Station Work Procedures (NSWPs) were implemented on May 12, 1997. The CAP NSWPs provide a consistent method for personnel at all ComEd nuclear sites to identify conditions adverse and not adverse to quality, identify problems and non-conformances, establish methods of investigating those conditions, identify the root cause(s), develop appropriate corrective actions that will prevent recurrence, and provide data that can be used for trending. As part of implementing the new CAP NSWPs, training was provided to more than 900 station personnel including Station managers. This training addressed changes to the program as well as new information related to increasing the understanding of the problem identification and resolution process.

The team noted that management was involved in the implementation of corrective actions in a number of ways. As of April 1, 1998, Senior Managers served as members of the Event Screening Committee (ESC). The ESC reviews and screens each PIF for several items, including concurrence with the initial reportability /operability determination performed by the Operating shift, determination of additional actions required and PIF significance level. The PIF significance level determines the level of investigation and hence the extent and depth of corrective action that may be required. Other areas of management involvement in the corrective action development was their concurrence and acceptance of proposed corrective actions as the result of root cause investigations and review and approval of Apparent Cause Evaluations (ACEs).

c. Conclusions

The team concluded that the actions planned or accomplished for Action Plans 1.1A and 5.1, under Restart action Plan Item C.2.2.h, “Management’s Ability to Implement Effective Corrective Actions,” were thorough, and if properly implemented, should be effective.

O8.7 Review of NRC Restart Action Plan 0350 Item C.3.4.b, “Engineering Assurance Group”

a. Inspection Scope (40500)

The team reviewed NRC Restart Action Plan, Item C.3.4.b, regarding Engineering Assurance Group, specifically, Action Plan 4.1, steps 2.0 - 2.3 for actions to implementing Engineering Assurance Group functions, Action Plan 4.2, step 5.0 and step 5.1 for actions improving vendor and operating experience reviews.

b. Observations and Findings

A System Operational Performance Inspection (SOPI), conducted in September 1996, identified a noncompliance with ASME Code XI pump testing requirements, failure to provide the required controls for design changes, untimely corrective actions to resolve conditions adverse to quality, and inadequate test control of surveillance testing. This inspection also revealed a fundamental deficiency in understanding of design bases, absence of adequate oversight and lack of guidance and training in the generation of

engineering products. The LaSalle County Generating Station response to the SOPI inspection report identified, as one contributing factor to these violations, a deficiency in the technical content and quality of Engineering products. The deficiency was attributed, in part, to lack of experience and training in the generation of engineering products. Another factor was the absence of adequate oversight to ensure Engineering product consistency and quality.

b.1. Action Plan 4.1, Step 2.0 - Fully implement Engineering Assurance Group functions. Reviews by Engineering assurance will be in-line for the following engineering products: Safety Evaluations, Operability Evaluations, Technical Specification clarifications, Root Cause Reports, selected design packages, selected material evaluations, LERs and regulatory submittals.

The team noted that LaSalle established the Engineering Assurance Group (EAG) in December 1996 to address a lack of experience, clear guidance and oversight associated with engineering products. The group consisted of experienced personnel with long-term, broad-based experience in engineering processes. The EAG provides oversight of activities that validate, maintain, and, if necessary, reconstitute the Station's design basis. EAG responsibilities include assuring that Engineering products are in compliance with current design bases and providing feedback on processes, procedures and training to improve the quality of Engineering activities to acceptable levels. EAG feedback was provided to individuals responsible for preparation and review of engineering products as an Engineering Oversight Record that contained all pertinent comments along with a numerical grade. These grades were used as a trending mechanism to determine if the quality of Engineering products improved. The team observed that while the EAG staff size has never reached initially planned levels, the
quality of engineering products has improved. The team determined that the EAG oversight and feedback mechanism was in place and functional.

b.2. Action Plan 4.1, Step 2.1 - Proceduralize Engineering Group functions.

The team noted that the current EAG policy and administrative instructions were defined in Revision 2 of the EAG charter. Additionally, the team determined that there was in-process oversight for Safety Evaluations (including Safety Evaluation Screenings), Operability Evaluations, Technical Specification Clarifications, Licensee Event Reports (LERs), and Notices of Violation. Also, the EAG performed finished product reviews on selected design packages, selected material evaluations, 10 CFR 50.59 screenings prepared for non-engineering products and selected calculations.

b.3. Action Plan 4.1, Step 2.2 - Initiate review of selected Engineering Processes (50.59, operability evaluations and minor mods) and determine changes required prior to restart.

The team determined that the EAG performed in-line reviews for Safety Evaluations, Operability Evaluations, Technical Specification Clarifications, selected design packages, material evaluations, LERs and regulatory submittals. Since the conception stage some EAG functions have been modified. These included in-line review of Root Cause Reports, selected design packages, and selected material evaluations. The Root Cause investigations that support the Root Cause Reports currently have an in-line review conducted by the Corrective Action Review Board (CARB) rather than the EAG. The team determined that the EAG's involvement in product review had contributed to improved

engineering products.

b.4. Action Plan 4.1, Step 2.3 - Provide interim reports of engineering product quality for the following: Safety Evaluations, Operability Evaluations, Licensee Event Reports, Responses to Notices of Violation and design packages.

The team reviewed EAG monthly reports that commenced in March 1997. The monthly reports documented the EAG engineering work product review and included engineering product quality trending information. The EAG ensured timely Corrective Actions were initiated whenever they identified a negative trend in the quality of an engineering product. The team observed that trending information showed a pattern of improved Engineering products since the EAG began.

b.5. Action Plan 4.2, Step 5.0 - Vendor information and Operating Experience Reviews.

The team determined that an improved procedure, NSWP-A-O, Revision 0, "Operating Experience," was issued for evaluating and initiating NOD-wide action in response to operating experience received at any of the ComEd nuclear stations. The team observed that the operating experience coordinator reviewed the daily notifications received at the plant as well as information from industry and NRC websites. The coordinator documented new operating experience items, assigned the review and screening to the appropriate engineer and assigned a due date. Additionally, a recent self-assessment has identified areas for improvement. The team noted that vendor information and operating experience items were tracked and reviewed appropriately and observed that important emerging operating experience items were written up in the daily POD and were discussed at the POD meeting.

b.6. Action Plan 4.2, Step 5.1 - Review selected vendor information and operating experience files to establish adequacy of review process in consideration of repeated failure to identify potential design problems with SBM control switches. Determine scope of Operating historical vendor information and industry experience that should be reviewed to determine confidence in past practices.

The team noted that previously some operating experience items had inadequate follow through. An example was the SBM switches where the licensee did not follow the vendor recommendation to periodically inspect the switches. An improved procedure, NSWP-A-O, Revision 0, "Operating Experience," was issued for evaluating and initiating NOD-wide action in response to operating experience received at any of the ComEd nuclear stations. The procedure provided for review and screening of operating experience items, development of responsive action, and review and evaluation of effectiveness of responsive action. Additionally, a recent self-assessment has identified areas for improvement. The team determined that the licensee has taken actions to assure that historical operating experience documents such as SALs have been received and documented.

c. Conclusions

The inspectors concluded that the actions planned or accomplished under Action Plan 4.1, action steps 2.0 - 2.3 for actions implementing Engineering Assurance Group functions and Action Plan 4.1, action steps 5.0 and 5.1 performing Vendor information and Operating

Experience reviews under Restart Action Plan Item C.3.4.b, “Engineering Assurance Group, were thorough, and if properly implemented, should be effective.

E8.2 Miscellaneous Engineering Issues

E8.2.1 (Closed) LER 50-373/97044: Potentially Unanalyzed Condition for Automatic Depressurization System (ADS) Accumulator Capacity Due to Lack of Design Basis Information.

During a system functional performance review (SFPR), the licensee raised concerns with the adequacy of the station's safety relief valve (SRV)-ADS accumulator capacity and the SRV-ADS associated sections of the updated final safety analysis report (UFSAR). The licensee’s SFPR disclosed that the design basis calculation for the SRV-ADS accumulator capacity could not be identified and either the accumulator capacity was potentially undersized or the accumulator capacity was adequate, but the UFSAR contained conflicting licensing basis information that required clarification. The licensee’s licensee event report (LER) proposed four corrective actions (identified in bold below) that were completed to resolve this concern.

a. Determine the licensing basis for the ADS accumulator capacity and the nitrogen supply. The licensee identified the ADS-SRV accumulator licensing basis criteria as:

- One actuation of an ADS-SRV with the drywell at its design pressure (45 psig).
- Two actuations of an ADS-SRV with the drywell at 70% of its design pressure (31.5 psig). For testing purposes, five actuations at a drywell pressure of 0 psig (atmospheric pressure) is equivalent to two actuations at 70% of drywell design pressure per General Electric NEDE-24956, “BWR ADS Pneumatic System Comparison To NUREG-0737 Requirement II.K.3.28,” dated August 1981.

The licensee identified the licensing basis criteria for the nitrogen supply was as stated in the LaSalle Technical Specification (TS) Bases 3/4.5.1 and 3/4.5.2 (last two paragraphs). The TS bases identified the nitrogen supply as two separate bottle banks of nitrogen bottles that backup the ADS accumulator compressed gas system to provide for long-term availability of ADS during and following an accident (i.e., ADS operability through the cooldown decay heat removal period).

b. Perform a calculation to support the adequacy of the ADS accumulator capacity as necessary. The licensee completed Calculation L-001115, "Sizing of ADS Accumulator," Revision 1, dated January 28, 1998, which supported the conclusion that the current accumulator/connecting piping system had adequate capacity to meet the above licensing basis criteria.

c. Submit a supplemental LER to report the results of the root cause investigation and determination of the safety consequences if the final calculation shows that the accumulators will not fully open a second time against 70 percent of Drywell design pressure. On March 5, 1998, the licensee submitted a supplemental LER (Revision 1) to the NRC, which stated the plant was not in an unanalyzed condition and that

the ADS accumulator capacity supported the licensing basis requirement.

d. Update the UFSAR as required. An inspector's request for verification of the associated UFSAR change revealed that a mistake had occurred within the licensee's UFSAR change process. A licensee review of the pending UFSAR changes failed to locate the change associated with LER 97-044. A Potential Issue Form (PIF) L1998-03636, "NRC identified: Failure to submit UFSAR change to UFSAR Coordinator," dated May 15, 1998, was initiated and the UFSAR change request was submitted to the UFSAR Coordinator. A Nuclear Tracking System (NTS) number was initiated to track the inclusion of the LER 97-044 change in the next update of the UFSAR.

This item is closed.

E8.2.2 (Closed) LER 50-373/97018: Fire Protection Carbon Dioxide (CO_2) Systems Inoperable Due to Improper Installation of Fire Damper Electrical Leads.

During a periodic visual inspection of fire dampers, the licensee discovered that the electrical leads to the electro-thermal links (ETLs) for fire dampers 0VD41Y and 1VD44Y could have interfered with the proper closing of the curtain type fire dampers. The ETLs actuate the fire dampers (close), which isolates the Division 1 (0 EDG) and Division 2 (1A EDG) emergency diesel generator (EDG) room boundaries. As a result, the impact on achieving the necessary CO_2 room concentration (34%) to suppress a diesel oil surface fire was unknown and the CO_2 systems were declared inoperable. The licensee's LER identified five corrective actions (identified below) that were completed to resolve this concern.

a. Fire watches were immediately established in accordance with TS 3.7.6. The inspectors verified that the fire watches were established as stated in the LER. No new problems were identified with the establishment of the fire watches, except as identified in corrective action number three below.

b. All other fire dampers having electrical leads that isolate boundaries to contain CO_2 were inspected and no conditions that could prevent a damper from closing were identified. The inspector's review of the completed LTS-1000-36, "Fire Damper Visual Inspection," Attachment G, Revision 5, dated December 3, 1993, (Work Request Task 950114229 01 dated April 21, 1997) identified no new concerns with the licensee's inspection/corrective action activities.

c. The affected dampers were modified to correct the condition. The CO_2 systems protecting the 1A and 0 EDG rooms were restored to operable status on May 2 and May 3, 1997, respectively. The inspector's review of DCP 9700182, "Reroute the Flexible Conduit to the Electro Thermal Link for Fire Dampers 0VD41Y and 1VD44Y," dated May 5, 1997, the work activities associated with fire damper 0VD41Y (Fire Protection Impairment Permit (FI) 1-97187) and fire damper 1VD44Y (FI 1-97188) revealed no other concerns. One minor LER inaccuracy was identified. The LER stated that the "1A" EDG CO_2 System was declared operable on May 2, 1997; however, the "1A" EDG CO_2 System FI 1-97179-TS was signed off as operable on May 3, 1997.

d. The Fire Protection Group (i.e., System Engineers and Fire Marshals) met to discuss this event and ensure that the proper configuration of the electrical leads is understood. No formal documentation initially existed indicating that a meeting had taken place. However, the inspectors discussed the LER's corrective action activities with the licensee and concluded that the corrective action had been completed. The licensee subsequently documented the LER's corrective action in a memorandum dated May 14, 1998.

e. Guidance in LEP-VD-01 (Replacement of Electro-Thermal Links) and LTS-1000-35 (Fire Damper Operational Test) will be enhanced (i.e., clarification statements and figures) to ensure that the ETL electrical leads do not interfere with the damper (when a damper is reset following a system actuation or functional test). LTS-1000-36 (Fire Damper Visual Inspection) will be revised to describe the proper configuration of the electrical leads. The procedure revisions will be completed by October 1, 1997. The inspectors reviewed LEP-VD-01, Revision 3, LTS-1000-35, Revision 4 and LTS-1000-36, Revision 6, and found all three procedures were revised as stated above and were issued on September 26, 1997.

This item is closed.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to licensee representatives during an exit meeting on June 5, 1998. The licensee acknowledged the findings and did not indicate that any of the material the inspectors reviewed was proprietary.

PARTIAL LIST OF PERSONS CONTACTED

ComEd
R. Chrzanowski, Quality and Safety Assessment
W. Kirchhoff, Acting Engineering Assurance Group Manager
T. O'Connor, Station Manager
R. Palmieri, System Engineering Supervisor
H. Pontius, Acting Regulatory Assurance Manager
J. Prevo, Root Cause Team Engineer
W. Riffer, Quality and Safety Assessment Manager
R. Stachniak, CAP Manager
J. Tokarz, Operating Experience Coordinator

INSPECTION PROCEDURES USED

Inspection Procedure 40500, “Effectiveness of Licensee Controls In Identifying, Resolving and Preventing Problems”
Inspection Procedure 92703, “Follow up - Engineering”

ITEMS OPENED AND CLOSED

Opened

None

Closed

50-373/97044	LER	Potentially Unanalyzed Condition for Automatic Depressurization System Accumulator Capacity Due to Lack of Design Basis Information
50-373/97018	LER	Fire Protection Carbon Dioxide Systems Inoperable Due to Improper Installation of Fire Damper Electrical Leads

LIST OF ACRONYMS AND INITIALISMS

ACE	Apparent Cause Evaluations
ADS	Automatic Depressurization System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CAPR	Corrective Action to Prevent Reoccurrence
CARB	Corrective Action Review Board
CFR	Code of Federal Regulations
CO_2	Carbon Dioxide
EAG	Engineering Assurance Group
EDG	Emergency Diesel Generator
ETL	Electo-Thermal Link
EPRI	Electrical power Research Institute
ESC	Event Screening Committee
ETLs	Electro-thermal Links
FI	Fire Protection Impairment Permit
GE	General Electric
HER	Human Error Reduction
IFI	Inspector Followup Item
LER	Licensee Event Report
NOD	Nuclear Operating Division
NRC	Nuclear Regulatory Commission
NSWP	Nuclear Station Work Procedure
NTS	Nuclear Tracking System
OER	Operational Experience Report
OOS	Out of Service
PCE	Parts Classification Evaluation
PIF	Problem Identification Form
PII	Performance Improvement International (a consultant)
(POD	Plan of the Day
PSIG	Pounds per Square Inch Gage
Q&SA	Quality and Safety Assessment
URI	Unresolved Item
VIO	Violation
SAL	Service Advisory Letter
SFPR	System Functional Performance Review
SIL	Service Information Letter
SOPI	System Operational Performance Inspection
SRV	Safety Relief Valve
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report

LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion on this list does not imply that NRC inspectors reviewed the documents in their entirety, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document in this list does not imply NRC acceptance of the document, unless specifically stated in the body of the inspection report.

Root Cause Reports

373-200-97-SCAQ00096	Unexpected Increase in Reactor Building Drain Tank Level During 1B RHR Loop Fill and Drain Due to Mispositioned Open High Point Vent Valves, 1E12-
F371B/F372B,	Caused by Apparent Human Error, Revision 2
373-200-97-SCAQ00097	Control Room Emergency Makeup Fan Start Due to Inadequate Self Check During a Procedure Walkdown, Revision 0
373-200-97-CAQS00098	Erratic VAR Indication During Load Acceptance Testing of 1A Diesel Generator (DG) Due to Intermittent Failure of Speed Tachometer Switch (STS), Revision 1
373-200-98-SCAQ00001	GE Type SBM Spring Return to Normal Control Switch Binding Due to the Post-Mold Cure Shrinkage Not Accounted for in the Design Tolerances of the Phenolic Rear Bearing Support, Revision 0
373-200-98-SCAQ00003	The Common Diesel Generator Tripped on Overspeed During a Slow Start Test While Manually Overriding Governor Control, Revision 0
373-200-98-SCAQ00005	Modification Test Not Prepared for a Design Change to the Lake Blowdown Flow Instruments Due to Inadequate Program Monitoring and Requirements, Revision 3
373-200-98-SCAQ00007	Unauthorized Radioactive Material Removed From the Radiological Posted Area and Left Outside Near Main Access Facility due to Worker Non-Compliance, Revision 0
373-200-98-SCAQ00010	Safety-Related Duct Supports Issued With Missing Welds Due to Personal Error." The team was not able to assess the root cause report without recourse to the investigators. The following questions were submitted, Revision 0
373-200-98-SCAQ00013	Check Valves 1E12-F451 & 1E12-448 Stuck Open Due to Scale and Debris Accumulation Failing Surveillance Test LOS-RH-Q1, Revision 1
373-200-98-SCAQ00015	High Radiation Area Violation and Personal Contamination Event Due to Worker Failing to Evaluate the As-Found Condition of the Area, Revision 0
373-200-98-SCAQ00016	Incorrect Oil Used in Safety Related Ventilation Damper Actuator Due to Incorrect Part/Item Number, Revision 0
373-200-98-SCAQ00019	Unit 1 Reactor Building Floor Drains Overflowed Due to Valve Leakage and Apparent Blockage in the Floor Drain System, Contaminating Building Walls and Floor and Areas at the 786' and 673' Elevations, Revision 1
373-200-98-SCAQ00024	Configuration Control Issue: Work Performed Outside of Out-of-service and Valves Closed, Due to Worker Non-Compliance and

Supervisor Deficiencies, Revision 0

Procedures

NSP-AP-3009	"Self-Assessment Program," Revision 0
NSWP-A-06	"Operating Experience (OPEX)," Revision 0
NSWP-A-10	"Station Performance Trending/Monitoring," Revision 1
NSWP-A-12	"Root Cause Report," Revision 1
NSWP-A-13	"Root Cause Investigation Procedure," Revision 1
NSWP-A-15	"ComEd Nuclear Division Integrated Reporting Program," Revision 1
NSWP-A-16	"Effectiveness Review," Revision 1
NSWP-A-17	"Apparent Cause Evaluation," Revision 1
LAP-850-6	"Processing of Operating Experience (OPEX) Information and Changes to Regulatory Rules," Revision 9
LAP 1500-4	"Site Program For Tracking of Corrective Actions," Revision 1
LAP 1500-8E	"Corrective Action Review Board (CARB) Procedure," Revision 1

Independent Safety Evaluation Group Evaluations

QSV 01-97-014	ISEG Assessment of LaSalle Station's System Functional Review Program 3/25/97
QSV 01-97-030	ISEG Followup of the Corrective Action Audit 9/8/97
QSV 01-97-031	Assessment of Engineering Restart Issues, Rev 1 9/30/97
QSV 01-97-034	ISEG Review of Corrective Action Review Board Activities and Engineering Assurance Group Activities 10/29/97
QSV 01-97-039	ISEG Review of Recent Design Change Packages
QSV 01-97-019	ISEG Review of LaSalle Station Implementation of Generic Letter 96-01, "Testing of Safety-Related Logic Circuits" 3/23/97
015-DES-95	EART Self-Assessment Final Report 4/22/96

Self-Assessments

QVL 01-98-033	First Quarter 1998 Self Assessment for Q&SA
QSV 01-97-014	Maintenance Rule Self-Assessment Report 3/20/97
98-01	Self-Assessment of Quality of Engineering Deliverables 3/27/98
	LaSalle Electrical Department Self-Assessment 1/6/98
	LaSalle Instrument Department Self-Assessment 1/6/98
	LaSalle Instrument Department Self-Assessment 3/17/98
	LaSalle Mechanical Department Self-Assessment 1/6/98
	LaSalle Mechanical Department Self-Assessment 3/17/98
	LaSalle Operations Self-Assessment 1/6/98
	Locked Valve Program LaSalle County Station 3/12/98

Assessments

QVS-01-98-018	Assessment of the Setpoint Control Program 3/16/98
QVS-01-98-016	Assessment Review of the Engineering Modification Process 3/16/98
QVS-01-98-015	Assessment of the Engineering Request Program 3/6/98
QVS-01-98-008	Assessment of Engineering Calculations 3/17/98
NODCA-98-RR	Nuclear Oversight Team - Assessment Report 2/2/98

NODCA-98-091-SLG Assessment of Self-Assessment Program and the Readiness to Implement NSP-AP-3009 4/28/98

EAG Monthly Reports

Report No. 1 Engineering Assurance Monthly Report 3/17/97
Report No. 2 Engineering Assurance Monthly Report 4/14/97
Report No. 2 May Quality Performance Indicators 6/3/97
Report No. 3 June Quality Performance Indicators 6/12/97
Report No. 4 August Quality Performance Indicators 8/6/97
Report No. 5 September Quality Performance Indicators 9/16/97
Report No. 6 October Quality Performance Indicators 10/14/97
Report No. 7 October Quality Performance Indicators 11/7/97
November Quality Performance Indicators 12/11/97
LEAG Engineering Assurance Group Activities for April, 1998 5/7/98

Audits

QAA 01-97-03 Engineering/Design Control 01-97-06

Corrective Action Records

01-98-006 125Vdc and 120Vac Safe Shutdown circuits do not have coordination calculations 02-16-98
01-98-042 Several calculations had not been turned over by engineering contractors, calculations missing from controlled storage and calculation referred to by wrong number in EWCS 03-17-98

PIFs

L1998-03636 NRC identified: Failure to submit UFSAR change to UFSAR Coordinator May 15, 1998
L1998-03942 5/27/98
L1998-03158 4/27/98

LERs

LER 50-373/97-044-00	Potentially Unanalyzed Condition for Automatic Depressurization System Accumulator Capacity Due to Lack of Design Basis Information January 2, 1998
LER 50-373/97-044-01	Potentially Unanalyzed Condition for Automatic Depressurization System Accumulator Capacity Due to Lack of Design Basis Information March 5, 1998
LER 50-373/97-018-00	Fire Protection Carbon Dioxide (CO_2) Systems Inoperable Due to Improper Installation of Fire Damper Electrical Leads May 21, 1997

Work Requests

Work Request 950114229 01	Fire Damper Visual Inspection April 21, 1997
Work Request 970046079 01	Reconfigure Electrical Leads to Electro Thermal Links 0VD41Y May 1, 1997
Work Request 970046081 01	Reconfigure Electrical Leads to Electro Thermal Links 1VD44Y May 1, 1997

Miscellaneous

Calculation L-001115	Sizing of ADS Accumulator Revision 1, dated January 28, 1998
DCP 9700182	Reroute the Flexible Conduit to the Electro Thermal Link for Fire Dampers 0VD41Y and 1VD44Y May 1, 1997
FI 1-97178-TS	"0" DG CO_2 System Is Inop. But Available Due to Inoperable Fire Damper 0VD41Y (FI 1-97187) April 21, 1997
FI 1-97179-TS	"1A" DG CO_2 System is Inop. but available due to inoperable fire damper 1VD44Y (FI 1-97188) April 21, 1997
LEP-VD-01	Replacement of Electro Thermal Links Revision 3, dated September 26, 1997
LTS-1000-35	Fire Damper Operability Test Revision 4, dated September 26, 1997
LTS-1000-36	Fire Damper Visual Inspection," Attachment G Revision 5, dated December 3, 1993
LTS-1000-36	Fire Damper Visual Inspection," Attachment G Revision 6, dated September 26, 1997
Memo LER 97-018-00,	Discussions of Event in the Fire Protection Group May 14, 1998
NEDE-24956	BWR ADS Pneumatic System Comparison To NUREG-0737 Requirement II.K.3.28 (General Electric Document) August 1981